

SOV/124-57-3-3486
Preliminary Elastic-plastic Twisting (cont.)

On the Most Advantageous Angle of Preliminary Elastic-plastic Twisting (cont.)
section. The author derives a formula for the minimum relative angle of preliminary twisting of a hexagonal shaft which would ensure that the working angle of twist remains within the elastic range, consistent with the yield strength of the material.

B. F. Romanchikov

Card 2/2

USSR/ Engineering - Surface quality

Card 1/1 Pub. 128 - 17/31

Authors : Drozd, M. S., Cand. Tech. Sc.

Title : Depth of a cold hardened layer during shot-hardening treatment of parts

Periodical : Vest. mash. 35/5, 48-50, May 1955

Abstract : It is shown that the problem of determining the thickness of a cold hardened layer during the shot-hardening process may be reduced to the calculation of the maximum depth of penetration of plastic deformation under a single impression which is being formed during static pressing in of the pellet. An approximate analytical solution to this problem is presented with respect to a cold hardened layer on a flat plate. Four USSR references (1948-1952). Graphs.

Institution :

Submitted :

AUTHOR: Drozhd, M.S.

32-1-31/55

TITLE: Sphere Test not Dependent on Test Conditions
(Sharikovaya proba, ne zavisyashchaya ot usloviy ispytaniya).

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 74-82 (USSR)

ABSTRACT: The author here begins with the statement that, according to the theories developed by several scientists, the conception known as "hardness" cannot be looked upon as a specific property of a material, but as a factor of its mechanical properties. On the other hand, the results obtained by hardness tests according to Brinell carried out on the same material but under different pressure stresses are unreliable, because here the conception of hardness depends on test conditions. In the chapter: The diagram of the pressing in of a small spherical body into a surface of an elastically-plastic half-space the theory is developed that the coefficient of hardness, which is determined by the pressing into the medium, must be looked upon not as a consequence of the elastic resistance of the material, but as a result of its plastic deformation, and that therefore it is also practically independent of the quality of the material (brand of

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steel). In the chapter: The physical similarity of casts it is said that N.N. Davidenkov "proved with absolute certainty" that "absolute hardness" (according to Hertz) "does not exist at all" and that the hardness index alone characterizes the properties of the material. The author arrives at the conclusion that between the "new hardness coefficient" set up by him and the effective stretching-strain limit (elasticity) of the material there exists a physically well-founded dependence. In the chapter: The method of determining the "new hardness coefficient" an example how this value is computed according to pressure stress is given. It is said in this connection that in view of the frequent need of such data an apparatus that has been sufficiently well tested must be used. The well-known Brinell press might be adapted for this purpose, if the respective tables or graphs are available. In conclusion, a number of theories dealing with this subject is mentioned, and it is said that the "new hardness coefficient" should be preferred to the "Brinell Tests", that test conditions need not be taken into account in this case, and that it is possible, instead of with

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semi-empirical formulae, to operate with physically well-founded facts. There are 6 figures, 6 tables, and 6 Slavic references.

ASSOCIATION: Stalingrad Mechanical Institute (Stalingradskiy mekhanicheskiy institut).

AVAILABLE: Library of Congress

Card 3/3 1. Materials-Hardness-Test methods 2. Materials-Hardness-Theory

DROZD, M.S., kand.tekhn.nauk, dots.

Analytic study of residual stresses caused by surface hardening.
Izv.vys.ucheb.sav.; mashinostr. no.5:42-52 '58. (MIRA 12:5)

1. Stalingradskiy mekhanicheskiy institut.
(Shot peening) (Rolling (Metalwork)) (Strains and stresses)

AUTHOR: Drozd, M. S.

SOV/32-24-8-30/43

TITLE: The New Hardness Number and the Basic Mechanical Properties of Steel (Novoye chislo tverdosti i osnovnyye mekhanicheskiye svoystva stali)

PERIODICAL: Zavodskaya Laboratoriya, Vol. 24, Nr 8, pp. 1002 - 1007 (USSR)

ABSTRACT: In this paper the possibilities of applying the new sphere test was investigated. This test was described in an earlier paper. The investigations were carried out on a large number of steel samples in various conditions and with hardness coefficient H_B of 95 to 498 kg/mm². A table of the investigated materials is given. The stretching-strain limit of these materials was calculated according to the equations $\sigma_s = 0,185 H \text{ kg/mm}^2$ and $\sigma_s = 0,1 H + 51 \text{ kg/mm}^2$, and the values obtained are given in tables. Determinations of the true tensile strength S_K were carried out based on its observed linear dependence on the hardness number H : $S_K = 0,2 H + 65 \text{ kg/mm}^2$. The results are tabulated. The conditional (σ_B) and true (S_B) breaking points were likewise

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The New Hardness Number and the Basic Mechanical
Properties of Steel

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determined. A.I. Kamyshnikov and G.Yu. Stolyarov participated in determining the transverse contraction (ϕ_K). A table of these values is also given. The equations derived in the paper are in complete agreement with the communications of Ya.B. Fridman (Ref 8). There are 5 figures, 4 tables, and 8 references which are Soviet.

ASSOCIATION: Stalingradskiy mekhanicheskii institut (Stalingrad Mechanical Institute)

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28 (5)

AUTHOR: Droz, M. S.

SOV/32-25-5-28/56

TITLE: Method of Determining a New Hardness Number (Metodika opredeleniya novogo chisla tverdosti)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol. 25, Nr 5, pp 597 - 601 (USSR)

ABSTRACT: As was already shown, it is necessary for the calculation of the hardness H of steel to measure the diameter of an indentation; the other investigations concern the analytical computation according to an equation (1). The values of the new hardness number H of steel as a function of the diameter (D) of the indentation (produced under the load P at the ratio $P/D^2 = 30$) are given as example (Table). As the tables of hardness according to Brinell H_B , as well as the value of H are given as functions of (D), function $H = \varphi (H_B)$ may be obtained from these tables which may, however, also be expressed by an equation (5). As soon as the values H and H_B are known for a certain load, it is possible to plot curves for $H_B = F (P)$ (figure 2 for some types of steel). On the basis of some considerations

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it is stated that in softer types of steel and tests with greater loads the values H and H_B are rather equal. Until recently it was assumed that there is only an empirical function (Ref 5) between the hardness numbers according to Brinell and Rockwell. It is confirmed that by means of H it is possible to describe this function for H_{RB} also analytically. By means of

an equation for H (11) a diagram of the function $H_{RB} = F_1(H_B)$

(Fig 3) is given. Some explanations are given indicating that the determination of H by means of the device designed by Rockwell is of special importance as it is possible to carry out comparative tests of the hardness of various metals irrespective of their properties of elasticity. There are 3 figures, 1 table, and 9 Soviet references.

ASSOCIATION: Stalingradskiy mekhanicheskiy institut (Stalingrad Institute of Mechanics)

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DROZD, M.S.

New hardness number and the Meyer constants for steel. Zav.lab.
26 no.1:90-93 '60. (MIRA 13:5)

1. Stalingradskiy mekhanicheskiy institut.
(Steel--Testing)
(Hardness)

DROZD, M.S.

New hardness number. Zav.lab. 26 no.3:386-388 '60. (MIRA 13:6)

1. Stalingradskiy mekhanicheskiy institut.
(Hardness)

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S/032/60/026/010/017/035
B016/B054

AUTHOR: Droz, M. S.

TITLE: Hardness of Cold-hardened Carbon Steel as a Consolidation
Criterion Under Repeated Stress

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 10, pp. 1139-1143

TEXT: The author studies the theoretical fundamentals of problems connected with a change in hardness of a material during plastic deformation.

First, he analyzes torsion, as a preceding deformation, for which he finds

equation (8) $H = (\sqrt{3}/0.185)\tau = 9.35\tau$. (H = hardness, τ = tangential stress). He checked experimentally equation (8) on specimens of steel, grades 15 and 35, as well as Armco iron. Next, he describes stretching as a preceding deformation, and derives functions (11) - (14). Figs. 3 and 4 illustrate the text. Finally, the author discusses compression as a preceding deformation (Fig. 5), and derives equation (15). On the basis of his analysis and experiments, he arrives at the following conclusions:
1) The hardness of steel consolidated by stretching, compression, or torsion, can be approximately calculated as a function of the preceding

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as a Consolidation Criterion Under Repeated Stress B016/B054

deformation. 2) The hardness H of cold-hardened steel characterizes the value of the yield strength under repeated stress, and allows an investigation of this characteristic as a function of the hardening degree. 3) The consolidation of the material during torsion is fully maintained in the subsequent compression during the hardness test. 4) The consolidation of the material during stretching or compression does not fully appear as a consolidation in a following compression. The yield strength is the closer to the maximum stress attained during the original deformation, the less the sample has been deformed. 5) A comparison of hardness before and after cold hardening can serve as a criterion for estimating the efficiency of different types of preceding deformation used for the purpose of consolidation. There are 5 figures and 9 Soviet references. ✓

ASSOCIATION: Stalingradskiy mekhanicheskiy institut
(Stalingrad Institute of Mechanics)

Card 2/2

DEOZD, M.S.

New dynamic hardness number. Zav.lab. no.4:472-477 '60.
(MIRA 13:6)

1. Stalingradskiy mekhanicheskiy institut.
(Metals--Testing) (Hardness)

S/148/60/000/009/024/025
A161/A030

AUTHOR: Drozd, M.S.

TITLE: The hardness of cast iron

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya,
no. 9, 1960, 169-172

TEXT: A new hardness number had been suggested for steel previously (Ref.1) (M.S.Drozd, "Zavodskaya laboratoriya", XXIV, 1958, 1.). The author points out that the standard ball test used for steel is not accurate due to the effect of elastic metal deformation, and the new hardness number system eliminates the inaccuracy. In the new method the plastic deformation of metal under test is separated from the elastic deformation of the metal and of the testing Brinell ball. Experiments were carried out with cast iron and it was stated that the elimination of the elastic deformation share from the hardness indication is equally applicable for cast iron. The chemical compositions of three cast iron grades experimented with, C415-32 (SCh15-32), C421-40 (SCh21-40) and XHB (KhNV), is given (%):

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The hardness of cast iron

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SCh15-32	3.3	-	2.25	5.7	0.7	0.15	-	-	-	-	0.09
SCh21-40	3.2	-	1.92	5.3	0.9	0.15	0.30	0.4	-	-	0.10
KhNV	3.1	0.85	1.61	-	0.8	0.54	0.50	1.4	0.5	-	0.05

Iron was cast into 30 mm diameter bars, and specimens cut from the bars in the form of prisms of square cross section with 20 mm side and 200 mm length the faces were carefully polished. Balls of 10 and 5 mm diameter were pressed into the surface, and the imprint diameters d were measured with a tool microscope, and the depths of restored imprint portions h (Fig.1) with a dial depth meter. The accuracy of the imprint diameters measured and the restored depth of imprints was 0.01 mm. The depth of the non restored imprint t was calculated with the formula

$$t = R - \sqrt{R^2 - a^2} \quad (1)$$

where R and a are the radius of the ball and of the imprint. The elastic restoration of the imprint was calculated as the difference

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The hardness of cast iron

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$w - t - h$

(2)

A linear dependence was observed between the force of applied pressure and the depth of the restored imprint (Fig.2). The formula suggested previously for steel remains valid for tests on cast iron:

$$H = \frac{P - P_1}{\pi D(h - h_1)} \text{ kg/mm}^2 \quad (3)$$

Conclusions: 1) A linear dependence between the force of the ball pressure and the depth of the restored imprint exists for cast iron (as well as for steel). Thus the new hardness number may be applied for cast iron. The new number does not depend on the test conditions (i.e. the applied pressure and the diameter of ball). 2) The Brinell hardness in studied cast iron grades depends to a high degree on the load on the ball and changes nearly 1.5 times (in KhNV iron), with P/D^2 increasing from 2.5 to 30. The new hardness number determined with the formula (3) is insensitive to the test conditions. 3) Replacement of the Brinell by the new hardness number gives

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The hardness of cast iron

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a stable constant of material and permits the evaluation of the mechanical properties of cast iron and steel by a single criterion, i.e. the resistance of material to plastic deformation from the pressure of the spherical punch applied. There are 5 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Stalingradskiy mekhanicheskiy institut (Stalingrad Mechanical Institute)

SUBMITTED: 28 January 1960

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The hardness of cast iron

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A161/A030

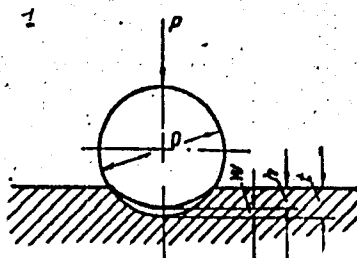


Fig. 1 - t - Depth of non restored imprint (total displacement of the imprint center); h - Depth of restored imprint (plastic displacement of the imprint center); w - elastic restoration of imprint

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The hardness of cast iron

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A161/A030

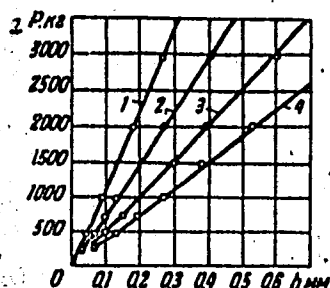


Fig. 2 - Linear dependence between the applied force and the depth of restored imprint: 1 - KhNV iron, D = 10 mm; 2 - SCh 21-40 iron, D = 10 mm; 3 - KhNV iron, D = 5 mm; 4 - SCh 21-40 iron, D = 5 mm

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18.8200 1555, 1327, 1413

S/032/60/026/010/017/035
B132/B208

AUTHOR: Droz, M. S.

TITLE: Hardness of cold-hardened carbon steel as a consolidation criterion on repeated load

PERIODICAL: Zavodskaya laboratoriya, v. 26, no. 10, 1960, 1139-1143

TEXT: The author studies the theoretical bases of the problems of the change in hardness of the material during plastic deformation. According to the theory of Guber-Mizes, the formation of plastic impressions resulting from the indentation of small balls may be calculated from

$\tau_8 = \frac{\sqrt{2}}{3} \sigma_S$. τ_8 denotes the octahedral tangential stress, σ_S the fluctuation limit of the material. Previous studies (M. S. Drozd, Zavodskaya laboratoriya, XXIV, 8 (1958)) already referred to the interdependence between hardness and elastic limit in steel which was not cold-hardened, and extended it to cold-hardened steel. $\sigma_S = 0.185H$, if $H \leq 600 \text{ kg/mm}^2$, and $\sigma_S = 0.1H + 51$, if $H \geq 600 \text{ kg/mm}^2$. Hence $\tau_8 = \frac{\sqrt{2}}{3} \cdot 0.185H = 0.087H$, if

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$H \leq 600 \text{ kg/mm}^2$, and $\tau_8 = \frac{\sqrt{2}}{3} \cdot (0.1H + 51) = 0.047H + 24$, if $H \geq 600 \text{ kg/mm}^2$.

By studying torsion as a temporary deformation the following equation is obtained: $H = \frac{\sqrt{3}}{0.185} \tau = 9.35\tau$ (8), (H - hardness, τ - tangential stress).

for $\tau \leq 64.2 \text{ kg/mm}^2$, and $H = 17.3\tau - 510$ for $\tau \geq 64.2 \text{ kg/mm}^2$. The author checked the equation for steel samples of the types 15 and 35, and for

Armco iron (Fig. 1). τ_{\max} was calculated from the formula by Nadai (Ref. 3:

A. Nadai, 'Plastichnost' i razrusheniye tel, I L. (1954). It follows

$$\tau_{\max} = \frac{1}{2\pi r^3} (2M_k + \frac{\partial M_k}{\partial \theta} \cdot \theta). \quad \theta \text{ denotes the specific torsion angle. The}$$

relationship between M_k and τ has been previously studied by I. V. Kudryavtsev (Ref. 4: Metallovedeniye i obrabotka metallov. 3 (1958)) for the steel samples of the types 3 and 45. The author then describes elongation as a temporary deformation, and obtains the following functions:

$$\tau_8^P = \frac{\sqrt{2}}{3} \alpha S \quad (11), \text{ where } \alpha \text{ is the coefficient of the volume under stress.}$$

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S132/3200

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and S the real stress in the sample at the moment after removal of stress.

$\tau_g^H = \frac{2}{3} \cdot 0.185H = 0.087H$ (12) followed from this equation. The relation

$\beta = \tau_g^H / \tau_g^P = \beta(\gamma)$ applied to all three steel types studied. (Fig. 3).

N. N. Davidenkov, N. I. Spiridonova (Ref. 6: Zavodskaya laboratoriya, XI, 6 (1945)) and P. O. Pashkov (Ref. 7: Zhurnal tekhnicheskoy fiziki, XIX, 2 (1949)) already mentioned these factors. It follows from Eq. 12

that $H = \frac{3}{0.185\sqrt{2}} \tau_g^H$ (13), where $\tau_g^H = \beta \tau_g^P$ and $\beta = \tau_g^H / \tau_g^P$, and

$H = \frac{3\beta S}{0.185} = 5.4\beta S$ (14). When studying the compression, the author

obtained Eq. 15: $H = \frac{S}{0.185} = 5.4 S$ (Fig. 5). The following conclusions

were drawn from these studies: 1) The hardness of the steel consolidated by elongation, compression or torsion may be approximately calculated as a function of the preceding deformation. 2) In the case of cold-hardened steel the hardness H characterizes the elastic limit on repeated load, and permits the study of this characteristic as a function of the degree of

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hardness. 3) The consolidation of the material due to torsion becomes completely manifest in the subsequent compression during the hardness test. 4) The consolidation of the material due to elongation or compression becomes manifest only partially. The elastic limit is closer to the maximum load. 5) Comparison of the hardness before and after cold-hardening may be used as a criterion for estimating the efficiency of different kinds of temporary plastic deformation. There are 5 figures and 9 references: 7 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Stalingradskiy mekhanicheskiy institut (Stalingrad Institute of Mechanics)

Legend to Fig. 1: Diagrams $\tau - \gamma$ and $H - \gamma$ for the steel types studied. a) Relative displacement; b) tangential stress in kg/mm^2 ; c) hardness H in kg/mm^2 .

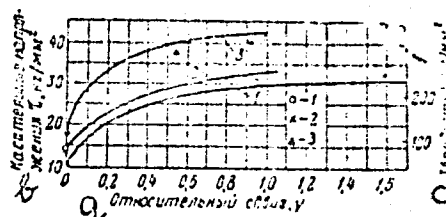


Fig. 1

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DROZD, M.S.

Conditions for putting together the results of Brinell test
measurements. Zav.lab. 27 no.8:1022-1027 '61. (MIRA 14:7)

1. Stalingradskiy mekhanicheskiy institut.
(Brinell test)

S/032/61/027/009/009/019
B117/B101

AUTHOR: Drozd, M. S.

TITLE: The specific deformation work as a characteristic of steel hardness

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 9, 1961, 1142-1146

TEXT: The author comments on a paper by S. S. Stepanov, "Hardness determination by indenting a ball" (Ref. 1: S. S. Stepanov. Zavodskaya laboratoriya, v. 26, 10 (1960)). He compares his own equations (Ref. 2: Zavodskaya laboratoriya, v. 24, 1 (1958)) for determining the new hardness number H : $H = (P - P_s)/\pi D h$ (1), or $H = (P - P_1)/\pi D (h - h_1)$ (2), with the equation proposed by Stepanov: $A_V = (A/V) = (3/2\pi) \cdot [P/h(1.5D - h)]$ (3). P and P_1 are the indentation forces; h and h_1 the corresponding depths of the recovered indentations; P_s a load under which a plastic deformation develops in the indentation center; D the ball diameter. Equations (1) and (2) are based on a linear dependence between P and h . H is, therefore, Card 1/4

The specific deformation work ...

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independent of the indentation force and the ball diameter. Eq. (3) is also based on calculating the recovered depth of indentation. Stepanov assumes that $A = Ph/2$ is the work of development of the indentation, and $V = (\pi/3)h^2(1.5D-h)$ the volume of the indentation. He points out that this formula produces a hardness number with an unambiguous physical sense, and which, like H , is independent of P and D . This equation has the advantage that the depth of only one indentation must be measured, and not that of two, as is the case with formula (2). Test results found for steel of the Y8 (U8) brand with a hardness of $HB = 245 \text{ kg/mm}^2$ are given as a proof. The principle of S. S. Stepanov's proposal was dealt with in detail by N. N. Davidenkov (Ref. 4: Nekotoryye problemy mekhaniki materialov, (Some Problems of Material Mechanics), Lenizdat (1943)). A quantitative study of Stepanov's proposal produced the following result: The hardness characteristic proposed by S. S. Stepanov is not a specific work of development of a plastic indentation, and depends on the load of the ball. For $P \gg P_S$, the numerical values of A_V in a certain load range practically agrees with the approximate H values found for $P_S = 0$ (Table). A further deepening of indentation is accompanied by a slow but steady increase of A_V .

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The specific deformation work ...

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B117/B101

The new hardness number can be determined with an accuracy sufficient for the practice according to the recovered depth, or the nonrecovered diameter, of an indentation. Thus, the determination of the specific work A_v is not simpler than the determination of the hardness H , according to the equation $H = P/\pi D h$ (9). There are 4 figures, 1 table, and 6 Soviet references.

ASSOCIATION: Stalingradskiy mekhanicheskiy institut (Stalingrad Mechanical Engineering Institute) ✓

Table. Values of A_v and H for different indentation forces of the ball;

$D = 10$ mm.

Legend: (1) for U8 steel; +) from Eq. (9); ++) from Eq. (1).

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S/148/62/000/001/011/015

E073/E335

18.1100

AUTHOR: Drozd. N.S.

TITLE: Theoretical relationship between the hardness of steel and its resistance to plastic deformation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 1, 1962, 147 - 159

TEXT: In earlier work the author of this paper proposed a new hardness number which enabled interrelating directly the hardness with the strength. He has shown that in the case of an indentation produced by a ball, the intensity of the plastic deformation at various points can be expressed by the exponential relation of the type:

$$\epsilon_{pl} = -khe^{kz} \quad (1)$$

where h - depth of the indentation,

z - coordinate taken from the centre along the line of indentation,

k - coefficient depending on h but remaining constant

Card 1/4 for various points along the z-axis. X

Theoretical relationship

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E073/E335

Thus, k represent the intensity of plastic deformation of the centre of the indentation for the case that it is displaced by 1 mm, since at this point the following expression is valid:

$$\epsilon_{pl} = -kh \quad (2) .$$

The depth h can either be measured or calculated from the new hardness number H . In the final form Eq. (2) can be expressed thus:

$$\epsilon_{pl} = -k \frac{P - P_s}{\pi DH} \quad (15)$$

where P - force applied to produce the indentation,
 P_s - force required for producing the plastic deformation
 at the centre of the indentation,
 D - wall diameter.

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Theoretical relationship

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For a given D , P_S is unequivocally determined by the new hardness number H . The relation between P_S , kg and H , kg/mm^2 for carbon and alloy steels ($D = 10 \text{ mm}$) is plotted in Fig. 4 and for H in excess of 300 kg/mm^2 this relation is a straight line which can be expressed by Eq. (16). Extensive experiments were made (on 19 different steels) in order to compare values of the intensity of the elastic and plastic deformation and stress at the centre of an indentation calculated from measured values of the new hardness number with actual strength values determined from tensile tests. The physical relations, is elucidated. A method of hardness measurement for the purpose of investigating the resistance-to-deformation of material during tension or compression for any degree of deformation has been worked out. Fig. 9 shows the dependence of the ultimate strength (kg/mm^2) of steel on the new hardness number (kg/mm^2), whereby the line represents values calculated

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Theoretical relationship

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according to a formula derived by the author, the crosses representing experimental results of the author, the circles - results obtained under shop conditions, triangles - data published in the literature. The here described method is thus suitable for indirect determination of the ultimate strength under shop and laboratory conditions. The author has shown that the coefficient of proportionality interrelating ultimate strength with Brinell hardness depends on the Poisson coefficient and the magnitude of uniform deformation of the material in tension. The author also established the reason why this coefficient did not remain constant for various steels. There are 9 figures and 4 tables.

ASSOCIATION: Volgogradskiy mekhanicheskiy institut
(Volgograd Mechanical Institute)

SUBMITTED: January 24, 1961

Card 4/5

DROZD, A. M.

"A Winter-Resistant Variety of Peas for the Foothill Zone of the Krasnodarskiy Kray." Cand Agr Sci, All-Union Inst of Plant Growing, Leningrad, 1953. (RZhBiol, No 7, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

DROZD, A.M., kandidat sel'skokhozyaystvennykh nauk.

Developing varieties of winter peas for the foothills of Krasnodar
Territory. Trudy VNIKOP no.5:191-209 '55. (MLRA 9:11)
(Krasnodar Territory--Peas--Varieties)

DROZD, A.M., kandidat sel'skokhozyaystvennykh nauk.

~~SECRET~~
Formation of types in Lima bean hybrids under conditions prevailing
in Krasnodar Territory. Trudy VNIKOP no.5:210-217 '55. (MLRA 9:11)
(Krasnodar Territory--Lima bean breeding)

DROZD, G.M.

KRIVIN, B.G.; DROZD, A.M.; OLESHKO, L.N.

New disinfectants for pulse seeds. Kons.i ov.prom. 12
no.6:32-35 Je '57. (MIRA 10:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennost (for Krivin).
2. Opytno-selektsionnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta konservnoy i ovoshchesushil'noy promyshlennosti v stanitse Krynskoy (for Drozd, Oleshko)
(Seeds—Disinfection)

~~DROZD, A.M.~~

Varieties of green peas and cultivation methods permitting mechanical harvesting. Kons. i ov. prom. 13 no.4:33-37 Ap '58. (MIRA 11:4)

1. Opytno-selektсионnaya stantsiya v stanitse Krymskoy.
(Peas)

OKSENT'YAN, U.G.; VORONKOVA, L.V.; DROZD, A.M.

Using antibiotics in controlling bacteriosis in phaseolus. Trudy
Vses. inst. sel'khoz. mikrobiol. 17:68-82 '60. (MIRA 15:3)
(Beans--Diseases and pests) (Antibiotics)
(Bacteria, Phytopathogenic)

DROZD, M.S.; DROZDOV, A.V.

Method of determining the hardness of a metal when the test specimen has a rough surface. Zav.lab. 29 no.12:1485-1488 '63. (MIRA 17:1)

1. Volgogradskiy mekhanicheskoy institut.

DROZD, M.S.; STOLYAROV, G. Yu.

Certain regularities in the dynamic hardness of steel. Izv. vys.
ucheb. zav.; Chern. met. 7 no.7:176-182 '64 (MIRA 17:8)

1. Volgogradskiy politekhnicheskiy institut.

DROZD, M.S.

Method of investigating the impact velocity dependence of the
hardness of steel by means of the ball indentation test.

Zav.lab. 30 no.4:480-484. '64.

(MIRA 17:4)

1. Volgogradskiy mekhanicheskiy institut.

DROZD, Mark Solomonovich

[Nondestructive testing of the mechanical properties of
metals] Opređenje mekhanicheskikh svoistv metalla bez
razrusheniia. Moskva, Metallurgii, 1965. 170 p.

(MIRA 18:2)

L 35892-66 EWP(e)/EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/WH

ACC NR: AP6010868

SOURCE CODE: UR/0115/66/000/002/0030/0032

AUTHOR: Kozyreva, Ye. N.; Droz, M. S.

ORG: none

TITLE: Using high-curvature diamond ball indenter for hardness testing of high-strength steels

SOURCE: Izmeritel'naya tekhnika, no. 2, 1966, 30-32

TOPIC TAGS: hardness, high strength steel, diamond

ABSTRACT: High-curvature diamond ball indentors are recommended for use in hardness testing of high-strength steels. The hardness can be calculated from this formula: $H = \frac{P - P_0}{\pi D (h - h_0)} = \frac{\Delta P}{\pi D (\Delta h)}$, where P_0 and P are previous and ultimate loads and h_0 and h are imprint depths, respectively; D is the ball diameter, i.e.,

Card 1/2

UDC: 620.178.152.2

L 35892-66

ACC NR: AP6010868

the double radius of curvature of a Rockwell-type diamond cone. The maximum permissible indentation depth is equal to the spherical segment altitude,

$R \left(1 - \sin \frac{\theta}{2} \right)$, where θ is the cone angle. The above theoretical considerations were verified by actual testing of 30 x 30 x 12-mm plates made from steels of 30-69 HRC hardness on a "super-Rockwell" machine. Experimental data is tabulated. It is found that by reducing the diamond test cone angle, the high-strength steels can be tested for hardness by the above method; thus, the method is applicable to all steels, from the softest to the hardest. Orig. art. has: 1 figure, 7 formulas, and 3 tables.

SUB CODE: 11, 13 / SUBM DATE: none / ORIG REF: 006

Card 2/2 *ell*

ACC NR: AR6033112

SOURCE CODE: UR/0137/66/000/007/1040/1040

AUTHOR: Drozd, M. S.

TITLE: Resistance of steel to plastic deformation on impact

SOURCE: Ref. zh. Metallurgiya, Abs. 71259

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovarnkhoz Nizhne-Volzhsk. ekon. r-na. Volgogradsk. politekhn. in-t. T. 1. Volgograd, 1965, 204-209

TOPIC TAGS: steel, plastic deformation, impact stress, tensile test, deformation resistance

ABSTRACT: The possibility of using the impact ball test to examine the basic mechanical properties of metal under impact was studied. The effect of hardness on the nature of velocity relationships of steel resistance to plastic deformation was determined from the stress-strain curves. Impact force measurement and, at the same time, oscillographic readings of period of load increase time during impact made it possible to calculate the deformation rate. It was shown that in the transition from static loading to impact loading, the σ_d/σ_s ratio increases.

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UDC: 539.4.019.1:669.14

ACC NR: AR6033112

For all impact speeds (up to 4 m/sec) investigated, the ratio σ/σ_0 is 0.67--0.86, increasing slowly with increase in steel hardness. This was confirmed by the results of direct experiments on the impact elongation of samples. The character of the velocity dependence of the tensile strength, determined by the new number of dynamic hardness H_d , corresponds to the regularities observed during tensile tests. In the transition from static to impact loading, σ_0 increases most when $0 < \dot{\epsilon} < 500 \text{ sec}^{-1}$. Further increase of the deformation rate decreases the intensity of the increase of σ_0 . L. Gordiyenko. [Translation of abstract]

[GC]

SUB CODE: 11, 20/

Card 2/2

SYRIS'KO, I.K. (g. Severo-Yeniseysk); DROZD, M.Ya., inzh. (g. Severo-Yeniseysk)

Roof bolting with looped rods as concrete reinforcement. Gor. zhur.
no.7:39-40 J1 '62. (MIRA 15:7)

1. Glavnyy inzhener Sovetskogo rudnika Severo-Yeniseyskogo priiskovogo
upravleniya (for Syris'ko).
(Mine roof bolting) (Reinforced concrete construction)

DROZD, N. I.

"Areas Without Runoff in the South of the Ukrainian SSR"

Izv. In-ta Gidrologii i Gidrotekhniki AN USSR, 10 (17), 25-31, 1953

The author notes that the surface runoff from the low-lying parts (various saucer-like bottomlands), which are some distance from the slopes of ravines or valleys, do not reach these latter places and are held in the lowlands without runoff. This fact must be taken into account in any plan for the construction of artificial ponds in the upper portions or sources of small valleys where there are no outlets for the underground waters to the open surface. (RZhGeol, No 3, 1954)

SO: W-31187, 8 Mar 55

5.

1. DROZD, N. I., SHVETS', H. I.

2. USSR (600)

4. Hydrology - Dnieper Valley

7. From the history of hydrological investigations of the Dnieper,
Visnyk AN URSR 24 No. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

DROZD, N.I.

"Historical Levels of Water on the Dnepr River," Izvestiya VGO, No. 6,
Nov/Dec, 54.

report presented at one of the 1953 meetings of the Hydrology Commission,
Ukrainian Affiliate, AU Geographic Society:

Sum. 573, 14 Jul 55

DROED, N.I.; SHVETS, G.I.

Dnieper River levels at Lotenano-Kamenka. Isv.Inst.gidrol.i gidr.
AN UBR 13:112-121 '55. (MIRA 9:2)
(Dnieper River--Stream measurements)

Drozd, N.I.

SHVETS', G.I.; DROZD, N.I.; LEVCHENKO, S.P.; MOKLYAK, V.I., vidpov. za
dal'niy redaktor; ZISIMEN, Ye.A. tekhnicheskii
redaktor.

[Catalog of rivers of the Ukraine] Katalog richok Ukrainy. Kyiv,
1957. 191 p. (MLRA 10:7)

1. Akademiya nauk URSR, Kiyev. Institut gidrologii ta gidrotekhniki
(Ukraine--Rivers)

DROZD, H.I., Cand Tech Sci--(diss) "Type classification of ~~the~~ ^{the res-}
USSR rivers and their hydrographic characteristics (for the ~~the~~
^{quintile} ~~series~~ of hydrologic ^{calculations} ~~computation~~)." Kiev, 1958. 9 pp; 1 sheet of
tables (Min of Higher Education USSR. Kiev Inst of Engineers of
Water Resources), 120 copies (ML,22-58,108)

- 84 -

DROZD, N.I.

Investigation data on silting of reservoirs in the Ukraine. Trudy
Lab. ozeroved. 7:92-97 '58. (MIRA 11:10)

1. Institut gidrologii i gidrotekhniki AN USSR.
(Ukraine--Reservoirs) (Ukraine--Silt)

VISHNEVSKIY, Palladiy Fedorovich[Vyshnevs'kiy, P.F.]; DROZD, Nafanail Iosipovich; ZHELEZNYAK, Iosif Aronovich; KRIZHANOVSKAYA, Ariada Borisovna[Kryshanivs'ka, A.B.]; KUBYSHKIN, Georgiy Pimenovich[Kubyshkin, H.P.]; LYSENKO, Klara Arkhipovna; MOKLYAK, Vladislav Ivanovich; CHIPPING, Galina Aleksandrovna [Chippinh, H.O.]; SHVETS, Grigoriy Ivanovich[Shvets, H.I.]; PECHKOVSKAYA, O.M.[Pechkova'ka, O.M.], red.isd-va; RAKHLINA, N.P., tekhn. red.

[Hydrologic calculations for rivers of the Ukraine]Gidrologichni rozrakhunky dlia richok Ukrainy; pry vidsutnosti spostereshen'. [By]P.F.Vyshnev'kiy ta inshi. Kyiv, Vyd-vo Akad.nauk URSR, 1962. 385 p. (MIRA 16:2)

(Ukraine--Rivers)

DROZD, N.I.

Sediment runoff during the spring thaw. Trudy GGI no.100:136-144
'63. (MIRA 16:9)

(Sedimentation and deposition)

DROZD, N.I.

Formation of surface runoff in the mountainous part of
the Crimea. Geofiz. i astron. no.8:139-141 '65. (MIRA 19:1)
1. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologi-
cheskiy institut.

ACC NR: AT6025569 (A, N) SOURCE CODE: UR/2599/66/000/060/0054/0061

AUTHOR: Drozd, N. I.; Goretskaya, Z. A.

ORG: None

TITLE: Map of average turbidity of the river waters in the UkrSSR

SOURCE: Kiyev. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut. Trudy, no. 60, 1966. Voprosy gidrologicheskikh issledovaniy i raschetov (Problems in hydrological research and calculations), 54-61

TOPIC TAGS: hydrology, ~~river water turbidity~~, ~~river water turbidity~~ map, ~~canal~~

ABSTRACT: The paper presents and discusses a map of river water turbidity of the Ukraine. The map shows average concentrations of suspended sediments of rivers with watersheds over 200 km². The map is shown in Fig. 1. The least turbidity, 0 - 20 grams/m³, is found in the northern flat forest zones of the republic, the highest (> 500 g/m³) - in the open regions of the center, at the southern slope of the Ukrainian crystalline shield. A review of the map and of the relations between relief structure, ground nature, erosion mechanisms and the river water turbidity is given. A map showing terrain roughness, characterized by the index of gullies length/area (km/km²) is also presented. Gullies in the Kanev dislocation region (SE of Kiyev) attain depths of 80 - 100 meters with a gully density index of 5 - 7 km/km².

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ACC NR: AT6025569



Fig. 1. Map of average turbidity of the river waters of the UkSSR. Suspended sediment magnitudes indicated by numbers, in grams/meter³

SUB CODE: 08/ SUBM DATE: 00 ORIG REF: 005

DROZD, N. K.

AID P - 4212

Subject : USSR/Engineering
Card 1/1 Pub. 103 - 13/20
Authors : Drozd, N. K. and Yu. N. Sychev
Title : Automation of Horizontal Hobbing Machine
Periodical : Stan. 1 instr., 1, 36, Ja 1956
Abstract : The authors describe some alterations of the Kol'man 12-A model horizontal hobbing machine done at the Moscow Automobile Plant im. Stalin. After certain mechanical additions, this machine, which cuts teeth on gear shafts for automobile transmission-boxes, was transformed into a semi-automatic gear-milling machine. One drawing.
Institution : None
Submitted : No date

MAKSIMOVICH, G.G.; NAGIRNYI, S.V.; DROZD, N.P.

Effect of circular hole-type stress raisers on the strength of brass
in active media. Vliian. rab. sred na svois. mat. no.3:58-62 '69.
(MIRA 17:10)

MAKSIMOVICH, G.G.; YANCHISHIN, F.P.; DROZD, N.P.

Effect of grain size on lasting strength of the microspecimens
of Armco iron. Fiz.-khim. mekh. mat. 1 no.2:193-197 '65.

(MIRA 18:6)

1. Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov.

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 8,
pp 220-221 (USSR) 15-57-8-11604

AUTHORS: Zhmako, N. M., Drozd, P. A., Ioseleva, M. A.

TITLE: Stabilizing of Sands by Chemical Methods (Zakrepleniye
peskov khimicheskimi metodami)

PERIODICAL: Sb. nauchn. rabot. Belorus. politekhn. in-t, 1956,
Nr 54, pp 51-56

ABSTRACT:

The authors have developed a new method for surface chemical stabilization of sandy soils. The method is based on use of a Na silicate solution. The basic binding substance in silicatization of sands is not silica gel but Ca (or Mg) hydrosilicate. This fact is confirmed by tests of B. A. Rzhanitsyn who, in addition to Ca chloride, used solutions of other chlorine salts and obtained specimens which differed sharply in stability. It is not possible to form a hydrate of

Card 1/3

15-57-8-11604

Stabilizing of Sands (Cont.)

Ca (or Mg) oxide by interaction of solutions of Na silicate and Ca (or Mg) chloride, since the hydrate is more soluble than Ca (or Mg) hydro-silicate. The nature of sand stabilizing by silicatization is based on the development, between the particles of sand, of a cement consisting of insoluble silicate with an amorphous structure and capable of producing specimens which are stable in water. Na silicate in the form of a solution of 2-normal and 2.5-normal concentration (with a silicate modulus of 2.7) was used for this purpose. Sulfuric acid salts of Mg, Zn and Al, Mn, Fe and Cu, used in the form of small crystals, served as the second component of the reaction. Crystal size was from 0.25 mm to 1 mm. Fine-grained sand was used, with particles of uniform diameters and a porosity of about 40 percent. A layer of sand 10 cm thick was mixed with a properly calculated amount of sulfuric acid salt, and a solution of Na silicate of appropriate concentration was poured over it. The crystals of the sulfuric acid salt, uniformly distributed in the sand, leave passages for the flow of the soluble silicate to the necessary

Gard 2/3

Stabilizing of Sands (Cont.)

15-57-8-11604

depth (10 cm); about four minutes are required for total penetration. The entire specimen hardens into a solid mass after 15 or 20 minutes. The specimens were taken out of the mold after three days and were immersed in water. They did not lose their stability even after a year's storage in water, were not changed during their submersion, and their permeability remained at 3 000 to 8 000 times below that of the initial sand specimens. Mg sulfate, used in the amount of 10 to 12 percent, is the cheapest and most suitable sulfuric acid salt for this work.

Card 3/3

E. G. Borisova

DROZD, P.A.

USSR/Chemical Technology. Chemical Products and Their I-9
Application - Silicates. Glass. Ceramics. Binders.

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12639

Author : Zhmako N.M., Drozd P.A., Ioseleva M.A.

Inst : Belorussian Polytechnic Institute

Title : On Frost Resistance of Sands Fixed by Chemical Methods

Orig Pub : Sb. nauch. rabot Belorus. politekhn. in-ta, 1956, No 54,
57-62

Abstract : Aqueous solutions of mixtures of sodium silicate and
salts of divalent or trivalent metals (for example
 $MgSO_4$), on being introduced into a sandy soil render the
latter mechanically strong (critical point on compres-
sion up to 8 kg/cm^2). Replacement of $1/3 \text{ } MgSO_4$ by tech-
nical boric acid increases strength of the sandy soil.

Card 1/1

- 90 -

8(6), 14(6)

SOV/112-59-5-8650

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5,
pp 36-37 (USSR)

AUTHOR: Drozd, P. A. and Vasil'chenko, G. V.

TITLE: Measuring the Discharge Coefficient of Spillway Openings at a Hydro-
electric Station

PERIODICAL: Dokl. AN BSSR, 1958, Vol 2, Nr 2, pp 73-77

ABSTRACT: If a spillway opening has a varying cross-section, the discharge
coefficient is determined from the total resistance of individual portions.
Cases are considered of reducing the outlet cross-section during closing the
gate with a constant head and of full-opening the gate with a varying head.
Discharge-coefficient tables are presented.

I.I.O.

Card 1/1

DROZD, P.A.

99-58-6-6/11

AUTHORS: Droz, P.A., Candidate of Technical Sciences, Sel'chenok,
V.P. and Ruban, A.P., Engineers

TITLE: Peculiarities in Projecting Dam Aprons of Lower-Head
Structures Built on Laminary Soils (Nekotoryye osobennosti
proyektirovaniya flyutbetov nizkonapornykh sooruzheniy na
sloistykh gruntakh)

PERIODICAL: Gidrotekhnika i Melioratsiya, 1958, Nr 6, pp 40-46 (USSR)

ABSTRACT: The author states that the existence of an easily permeable
soil under one with even greater water permeability represents
a considerable danger to the stability of foundations and
structures. Under such circumstances the laminae have to be
considered even in cases of little correlation of the filtra-
tion coefficients $\eta = 5-7$, since the discharge gradients might
grow by 2 to 3 times and the filtration pressure by 1.2 to
1.5 times. An increase of the coefficient of the laminae
 $\eta = \frac{k_2}{k_1}$ sharply reduces the efficiency of sheet piles in
alleviating the pressure. The loss of pressure is mainly
observed in the upper layer of the soil. In case of $\eta > 30$ the

Card 1/2

99-58-6-6/11

Peculiarities in Projecting Dam Aprons of Lower-Head Structures
Built on Laminary Soils

size of the subsurface structures might be reduced to a minimum. The loss of pressure concentrated on the upstream floor section increases the importance of the latter and its connection with the soil foundation and the spillway bucket. This is especially important if the upper layer has a small capacity so that the spillway bucket of the apron cuts right through it (Figure 1,a). Calculations of the filtration and projections of subsurface retaining structures need not necessarily include the laminae, if the capacity of the upper layer has a small coefficient of filtration $T > 3 S_1$ (S_1 - the length of the biggest sheet pile). A coefficient of 1.2 to 1.5 proved to be the best for the filtration pressure in the spillway bucket of the aprons. According to figure 5, correction factors might be used for the filtration gradients. It is possible to reduce the filtration pressure and the discharge gradients by replacing the upper layer with bedding soils or more permeable soils, within the range of the whole erosion control section. There are five figures, two tables and three Soviet references.

1. Soils-Water permeability

Card 2/2

DROZD, P.I. (Kiyev)

Model of a heat engine. Fiz.v shkole 22 no.6:53-54 N-D '62.
(MIRA 16:2)
(Heat engines--Models) (Physics--Experiments)

DROZD, Stanislaw, mgr.

Organizational development and 15 years achievements of capital investment services. Przegl techn 84 no.26:3-4 30 Je '63.

1. Dyrektor Departamentu Inwestycji Mieszkaniowych, Warszawa.

SOV/137-58-9-18903

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 106 (USSR)

AUTHOR: Drozd, S.N.

TITLE: Making Friction Disks by Powder Metallurgy (Izgotovleniye friktsionnykh diskov metodom poroshkovoy metallurgii)

PERIODICAL: V sb.: Mashinostroitel' Belorussii. Nr 4, Minsk, 1957, pp 71-74

ABSTRACT: A mixture of Cu, Fe, Pb, Sn, and graphite powders is compacted at $1.5-2 \text{ t/cm}^2$ as a facing and is baked to a precopperized (7-10 micron) and tinplated (also 7-10 micron) steel disk. Sintering is performed in airtight containers under pressure in an atmosphere of dissociated NH_3 at 720°C for 3 hours, with slow heating and cooling. Then the facing is fixed by heat by being held in a fixture for 4 hours at 400° . The specifications and conditions the finished disks have to meet to pass technical inspection are stated.

A.N.

1. Disks--Production 2. Powder alloys--Performance 3. Disks--Inspection

Card 1/1

ALEKSANDROV, B.I.; MISHIN, P.A.; DROZD, S.N.; VASILETS, F.P.

Effect of the surface heafening on the wear resistance of the case
of the rear axle shaft. Avt.prom. no.2:35-36 F '61. (MIRA 14:3)

1. Institut mashinovedeniya AN BSSR i Minskii avtozavod.
(Automobiln—Axles)

MISHIN, P.A.; DROZD, S.N.

Using surface hardening in manufacturing ball pins for the MAZ
motor vehicles. Avt.prom. 28 no.1:39-41 Ja '62. (MIRA 15:2)

1. Minskiy avtozavod.
(Cementation (Metallurgy))

ALEKSANDROV, B.I.; MISHIN, P.A.; FUNSHTEYN, Ya.N.; DROZD, S.N.;
VASILETS, F.P.

Effect of surface hardening on the strength of the rear semiaxle
casing of motor vehicles. Sbor.trud.Inst.mash.i avtom.AN BSSR
no.2:29-45 '61. (MIRA 15:3)
(Case hardening) (Motor vehicles—Axles—Testing)

P/532/62/000/016/002/003
D237/D308

AUTHOR: Drozdz, Tadeusz, Master of Engineering

TITLE: The analogy between heat transfer, mass transfer and fluid friction in steady state axially symmetric flows of viscous fluid in the turbulent region

SOURCE: Warsaw. Instytut Lotnictwa. Prace. no. 16, 1962, 20-29

TEXT: The author investigates the physical aspects of the above analogy in the systems characterized by similar transverse distributions of the coefficients of the turbulent kinematic viscosity, turbulent temperature equalization ($\epsilon_T \sim 1$) and turbulent diffusion ($\epsilon_D \sim 1$). Using some simplifying assumptions the author derives the expression for the rate of deformation in generalized coordinates. Reynolds' principle of averaging leads to further simplifications, resulting in three partial differential equations describing the heat, mass and friction transfer, which are then solved by approximate methods. The solutions were checked against experimental and

Card 1/2

The analogy between ...

P/532/62/000/016/002/003
D237/D308

empirical data and illustrated by a $\mu(R_e, Pr)$ diagram over the region $Pr = 10^{-3} - 10^3$ and $Re = 10^3 - 10^7$. Satisfactory agreement was found. The author claims that none of the existing theories gives a satisfactory solution of the problem for the entire region stated. There is 1 figure.

SUBMITTED: November, 1961

Card 2/2

AVGUSTOVSKIY, I., otv. red.; DROZD, T.A., red.izd-va; SHEVCHENKO,
T.N., tekhn. red.

[Standard production calculations for assembling sanitary
engineering systems in series I-439 A apartment houses]
Tipovye proizvodstvennye kal'kuliatsii na montazh sanitarno-
tekhnicheskikh sistem v zhilykh domakh serii I-439A. Moskva,
Gosstroizdat, 1963. 23 p. (MIRA 17:4)

1. Russia (1917- R.S.F.S.R.) Gosudarstvennyy komitet po de-
lam stroitel'stva.

DYSHKO, Ye.I., kand. tekhn. nauk, red.; DROZD, T.A., red.;
KOMAROVSKAYA, L.A., tekhn. red.

[Instructions for designs. Criteria and specifications for reinforced concrete and concrete elements subject to the action of water] Instruktsiia po proektirovaniu. Priznaki i normy agressivnosti vody-sredy dlia zhelezobetonnykh i betonnykh konstruktсий (SN 249-63). Moskva, Gosstroizdat, 1963. 16 p. (MIRA 17:2)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.

IVANOV, Yu.M., doktor tekhn. nauk; MAZUR, F.F., nauchn. sotr.;
POL'SHIN, D.Ye., kand. tekhn. nauk; FEDOROV, A.N.,
nauchn. sotr.; SEREBRENNIKOV, L.S., nauchn. sotr.;
SMORODINOV, M.I., kand. tekhn. nauk; DROZD, T.A., red.
izd-va; MOCHALINA, Z.S., tekhn. red.

[Instructions on work involving the handling of radio-
active substances in research establishments of the State
Committee on Construction of the Council of Ministers of the
U.S.S.R.] Instruktsiya po rabote s radioaktivnymi veshche-
stvami v nauchno-issledovatel'skikh uchrezhdeniyakh Gos-
stroia SSSR. Moskva, Gosstroizdat, 1963. 105 p.

(MIRA 17:2)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut
stroitel'nykh konstruktsiy. 2. Tsentral'nyy nauchno-issledo-
vatel'skiy institut stroitel'nykh konstruktsiy, Moscow (for
Mazur). 3. Nauchno-issledovatel'skiy institut osnovaniy i
podzemnykh sooruzheniy (for Fedorov, Smorodinov). 4. Nauchno-
issledovatel'skiy institut stroitel'noy fiziki i ograbdayu-
shchikh konstruktsiy (for Serebrennikov).

KARPOVSKIY, I.I., inzh., red.; BUDANOV, G.V., inzh., otv. za vyp.;
DROZD, T.A., red.; MIKHEYEVA, A.A., tekhn. red.

[Collection of budget standards for expenses and standard sets of equipment and goods for the interior appointments of public and administrative buildings] Sbornik smetnykh norm zatrat i tipovykh naborov oborudovaniia i predmetov vnutrennego ubranstva obshchestvennykh i administrativnykh zdani. Moskva, Gosstroizdat. Vol.4. [Buildings for therapeutic and preventive medicine and children's pre-school institutions. Supplements to the collections in Vols.1, 2, and 3 of the 1961 edition, no.1] Ob"ekty lechebno-profilakticheskogo naznachenii i detskikh do-shkol'nykh uchrezhdenii. Dopolneniia k sbornikam toma 1, 2 i 3 izdaniia 1961 g., vyp. 1. 1963. 138 p. (MIRA 17:4)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.

MAKAROV, A., ved. ispolnitel'; KOZLOVA, L., ispolnitel';
AVGUSTOVSKIY, I., otv. red.; DROZD, T.A., red.;
MIKHEYEVA, A.A., tekhn. red.

[Standard industrial calculations for assembling sanitary
engineering systems in series I-335 apartment houses] Ti-
pove proizvodstvennye kal'kuliatsii na montazh sanitarno-
tekhnicheskikh sistem v zhilykh domakh serii I-335. Mo-
skva, Gosstroizdat, 1963. 21 p. (MIRA 17:2)

1. Russia (1917- R.S.F.S.R.) Gosudarstvennyy komitet po
delam stroitel'stva.

VIL'BERG, S.S. [deceased]; DROZDOV, V.A.; KARATEYEV, D.A. [deceased];
MYSHLYAYEVA, L.V., dots.; SAYUSHKINA, Ye.N.; SENETSKAYA,
L.P.; CHIVIKOVA, A.N.; DRAKIN, S.I., dots., retsenzent

[Methodological textbook for independent student work in a
course of analytical chemistry] Uchebno-metodicheskoe po-
sobie dlia samostoiatel'noi raboty studentov nad kursom
analiticheskoi khimii. Moskva, Mosk. khimiko-tekhnolog.
in-t, 1964. 150 p. (MIRA 18:12)

DROZD, V. G., Engr., Pobedin, I. S., Cand. Tech. Sciences; Bayrakov, V. I. Engr.,

"Analysis of Continuous Cold-Rolling of Thin-Wire on a TeKBMM-17 12 Stand Rolling Mill," Rolling Mills; Studies, Calculation, Design and Operation, No. 8, Moscow, Mashgiz, 1956. 258 p. ^{6 107}

Articles by Pobedin, I. S.; Bayrakov, V. I., and Drozd, V.G., describe a new 12-stand continuous cold-rolling mill for thin wire (to 1.8 mm diameter). Results of the application of this new process are also given.

DROZD, V.G.

POBEDIN, I.S., kandidat tekhnicheskikh nauk; BAYRAKOV, V.I., inzhener;
DROZD, V.G., inzhener.

Investigating continuous cold rolling of thin wire on a TSZBM-17
12-stand mill. [Trudy] TSNIITMASH no.83:107-117 '56. (MLMA 10:3)
(Rolling (Metalwork)) (Wire) (Steel--Cold working)

Drozhd V.G.

130-58-2-17/21

AUTHORS: Pobedin, I.S., Bayrakov, V.I., Uglov, M.G. and Drozhd, V.G.

TITLE: Production of Thin Wire by Cold-rolling (Proizvodstvo tonkoy provoloki kholodnoy prokalkoy)

PERIODICAL: Metallurg, 1958, Nr 2, pp 32 - 34 (USSR)

ABSTRACT: Production of wire by drawing has a lower productivity than rolling, especially for special steels. In 1951, TsKBMM TsNIITMASH designed and made a 12-stand mill for the continuous rolling of thin, special-steel wire in an attempt to replace drawing. The mill (Fig.1) is intended for cold-rolling 6-8 mm diameter coiled rod into 1.5 - 2 mm diameter wire in 36 passes or hot-rolling 10-15 or 12-18 mm diameter rod into 6-8 mm diameter coiled rod. The authors give details of this mill and of various systems of roll-pass design which have been tried. The system finally adopted (Fig.2) was studied when rolling type Kh15N60 alloy (Table 1) and showed no regularity in the distribution of forces acting on the rolls. It was found that metal adhesion was taking place in some passes and cast-iron inserts were provided there. The rolling speed for this type of alloy was 20-25% greater than drawing and the authors consider that these preliminary experiments are promising as regards higher Card1/1 rolling speeds. There are 2 figures and 1 table.

AVAILABLE: Library of Congress

1. Rolling mills-Applications 2. Wire-Production

S/137/60/000/011/014/043
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 11, p. 116,
26127

AUTHOR: Drozhd, V.G.

TITLE: The Magnitude and Nature of Distribution of Specific Pressure in
Plain Grooves

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu: "Sovrem. dostizh.
prokatn. proiz-va", Vol. 2, Leningrad, 1959, pp. 93 - 103

TEXT: It was established that during hot rolling in simple grooves the
Ekelund, Unksov, Korolev formulae yield approximately the same $P_{av}K$ values. It
is recommended to determine K by the Ekelund formula. The distribution of true
specific pressure P over the grip arc was determined when rolling T.5 (St.5)
and $\chi 15$ (ShKh15) steel in extrusion dies at 900 - 1,200°C and a speed of 0.125 -
0.8 m/sec. Experimental data on the distribution of pressure over the grip arc
coincide with those obtained by the Tselikov-Korolev formula. The shape of pres-

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S/137/60/000/011/014/043
A006/A001

The Magnitude and Nature of Distribution of Specific Pressure in Plain Grooves
sure graphs does not depend on changes in temperature and speed within the indicated range. The distribution of maximum pressure values across the groove width approaches the distribution of natural extrusions. ✓

L.M.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

DROZD, V.G.; PRIKHOD'KO, I.F.

New roll stands for shape mills. Metallurg 5 no.5:31-35 My '60.
(MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy insitut metalloobrabotki
i mashinostroyeniya.
(Rolling mills)

DROZD, V.G.; TETEL'BAUM P.I.; PRIKHOD'KO, I.F.

Rolling mill roller guides. Metallurg 6 no.11:22-25
N '61. (MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskogo
mashinostroyeniya i Elektrostal'skiy zavod tyazhelogo
mashinostroyeniya.

(Rolling mills)

POBEDIN, Ivan Sergeyevich; DROZD, Vladimir Grigor'yevich, Prinimali
uchastiye: FEDIN, V.P., inzh.; KALININ, V.P., kand. tekhn. nauk;
ASTAKHOV, I.G., red.; BRINZA, V.N., red.izd-va; ISLENT'YEVA, P.G.,
tekhn. red.

[Production of merchant shapes] Proizvodstvo sortovoi stali. Mo-
skva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metal-
lurgii, 1962. 248 p. (MIRA 15:1)
(Rolling (Metalwork))

AZARENKO, B.S., kand. tekhn. nauk; AFANAS'YEV, V.D., kand. tekhn. nauk;
 BROVMAN, M.Ya., inzh.; VAVILOV, M.P., inzh.; VERNIK, A.B., inzh.;
 GOLUBKOV, K.A.; GUBKIN, S.I., akademik [deceased]; GUREVICH, A.Ye.,
 inzh.; DAVYDOV, V.I., kand. tekhn. nauk; DROZD, V.G., inzh.;
 YEREMOLAYEV, N.F., inzh.; ZHUKOVICH-STOSHA, Ye.A., inzh.; KIRILIN,
 N.M., kand. tekhn. nauk; KOVINEV, M.V., inzh.; KOGOS, A.M., inzh.;
 KOROLEV, A.A., prof.; KUGAYENKO, M.Ye., inzh.; LASKIN, A.V., inzh.;
 LEVITANSKIY, B.A., inzh.; LUGOVSKIY, V.M., inzh.; MEYEROVICH, I.M.,
 kand. tekhn. nauk; OVCHAROV, M.S., inzh.; PASTERNAK, V.I., inzh.;
 PERLIN, I.L., doktor tekhn. nauk; POBEDIN, I.S., kand. tekhn. nauk;
 ROKOTYAN, Ye.S., doktor tekhn. nauk; SAF'YAN, M.M., kand. tekhn.
 nauk; SMIRNOV, V.V., kand. tekhn. nauk; SMIRNOV, V.S.; SOKOLOVSKIY,
 O.P., inzh.; SOLOV'YEV, O.P., inzh.; SIDORKEVICH, M.A., inzh.;
 TRUET'YAKOV, Ye.M., inzh.; TRISHCHINSKIY, I.S., kand. tekhn. nauk;
 KHENKIN, G.N., inzh.; TSELIKOV, A.I.; GOROBINCHENKO, V.M., red.
 izd-va; GOLUBCHIK, R.M., red. izd-va; RYMOV, V.A., red. izd-va;
 DOBUZHINSKAYA, L.V., tekhn. red.

[Rolling; a handbook] Prokatnoe proizvodstvo; spravochnik. Pod
 red. E.S.Rokotiana. Moskva, Metallurgizdat. Vol.1. 1962. 743 p.

(MIRA 15:4)

1. Akademiya nauk BSSR (for Gubkin). 2. Chlen-korrespondent Akademii
 nauk SSSR (for Smirnov, Tselikov).

(Rolling (Metalwor))—Handbooks, manuals, etc.)

DROZD, V. G.

(40)

PHASE I BOOK EXPLOITATION

30V/6044

- Rekolyan, Ye. S., Doctor of Technical Sciences, Ed.
- Prokatnoye proizvodstvo; spravochnik (Rolling Industry; Handbook)
v. 2. Moscow, Metallurgizdat, 1962. 685 p. 8500 copies
printed.

Authors: P. A. Aleksandrov, Doctor of Technical Sciences;
V. P. Anisiforov, Candidate of Technical Sciences; V. I. Bayrakov,
Candidate of Technical Sciences; M. V. Barbarich, Candidate
of Technical Sciences; B. P. Bakhtinov, Candidate of Technical
Sciences [deceased]; B. A. Bryukhanenko, Candidate of Economic
Sciences; M. V. Vasil'chikov, Candidate of Technical Sciences;
A. I. Vitkin, Doctor of Technical Sciences; S. P. Granovskiy,
Candidate of Technical Sciences; P. I. Grudev, Candidate of
Technical Sciences; I. V. Gunin, Engineer; M. Ya. Dzugutov,
Candidate of Technical Sciences; V. G. Drozd, Candidate of
Technical Sciences; N. P. Yermolayev, Engineer; G. M. Katsnel'son,
Candidate of Technical Sciences; M. V. Kovynov, Engineer;
M. Ye. Kugayenko, Engineer; N. V. Litovchenko, Candidate of
Technical Sciences; Yu. M. Matveyev, Candidate of Technical
Sciences

Card 1/14

(40)

SOV/6044

Rolling Industry; Handbook

Sciences; V. I. Moleshko, Candidate of Technical Sciences; N. V. Molchov, Engineer; A. K. Ninburg, Candidate of Technical Sciences; V. D. Nosov, Engineer; B. I. Panshenko, Engineer; O. A. Plyatskovskiy, Candidate of Technical Sciences; I. S. Pobedin, Doctor of Technical Sciences; I. A. Priymak, Professor, Doctor of Technical Sciences [deceased]; A. A. Protasov, Engineer; M. M. Saf'yan, Candidate of Technical Sciences; N. M. Fedosov, Professor; S. N. Filipov, Engineer [deceased]; I. N. Filippov, Candidate of Technical Sciences; I. A. Fomichev, Doctor of Technical Sciences; M. Yu. Shifrin, Candidate of Technical Sciences; E. R. Shor, Candidate of Technical Sciences; M. M. Shternov, Candidate of Technical Sciences; M. V. Shuralev, Engineer; I. A. Yul'vets, Candidate of Technical Sciences; Eds. of Publishing House: V. M. Gorobinchenko, R. M. Golubchik, and V. A. Rymov; Tech. Ed.: L. V. Dobuzhinskaya.

PURPOSE: This handbook is intended for engineering personnel of metallurgical and machine-building plants, scientific research

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Rolling Industry; Handbook

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institutes, and planning and design organizations. It may also be used by students at schools of higher education.

COVERAGES: Volume 2 of the handbook reviews problems connected with the preparation of metal for rolling, the quality and quality control of rolled products, and designs of roll passes in merchant mills. The following topics are discussed: processes of manufacturing semifinished and finished rolled products (the rolling of blooms, billets, shapes, beams, rails, strips, wire, plates, sheets, and the drawing of steel wire), hot-dipped tin plates, lacquered plates, floor plates, tubes made by different methods, and special types of rolled products. Problems of the organization of rolling operations are reviewed, and types of rolled products manufactured in the USSR are shown. No personalities are mentioned. There are no references.

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I. V. Gunin, and I. N. Filippov)

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(N. M. Fedosov)

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and Beams (I. S. Pobedin, and V. G. Drozd)

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DROZD, V. I.

Use of penicillin at the feldsher and midwife station, Fel'd. i akush., No 7, 1952

DROZD, V.I.

SHANDALOV, D.A., fel'dsher (Talass); ~~DROZD, V.I., fel'dsher (Minskaya~~
oblast'); PEKUR, M.I., fel'dsher (Krasnodarskiy kray);
SHTANCHAYEV, S.TS., pomoshchnik epidemiologa (Kokchetav)

Notes on the article by Feldsher B.N.Tishkov on "Intravenous injections
with detached needle." Fel'd. i akush. no.12:36-39 D '54. (MIRA 8:2)
(INJECTIONS
intravenous with detached needle, discussion)